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Comparing Physicians' Receptivity to Sales Calls

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Firms potentially can increase revenues from new product sales by considering differences in consumer learning and responsiveness.

ANN ARBOR, Mich.—Firms spend nearly half of their marketing budgets to promote new products, which generally account for a quarter of all sales and revenue growth.

In 2000 alone, the pharmaceutical industry spent \$8.5 billion on marketing communication directed at physicians. Most of that amount went for "detailing," which involves personal sales calls on prescribing doctors by firm representatives. However, questions invariably arise over the effectiveness of this massive expenditure of marketing resources during new-product launches.

In a recent study of the pharmaceutical industry, Puneet Manchanda of the University of Michigan's Ross School of Business and Sridhar Narayanan of Stanford University found significant differences among individual physicians both in the rate at which they learn about the quality of new prescription drugs and how responsive they are to detailing by company reps during the introductory and rollout periods. The researchers suggest that pharmaceutical firms could increase their revenues by taking these differences across consumers and over time into account when making allocation decisions about physician-directed marketing communication related to new drugs.



Puneet Manchanda

"Our results show that heterogeneity in learning rates across physicians is economically significant for firms, and that accounting for it can lead to a considerable revenue gain," says Manchanda, associate professor of marketing at the Ross School of Business.

For their study, Manchanda and Narayanan use a new and unique dataset (from ImpactRx, a pharmaceutical market-research company) comprising a panel of 900 physicians in the United States. They observe the prescriptions written by doctors for three different erectile dysfunction (ED) drugs—Cialis, Levitra and Viagra—and also the sales calls made by representatives from pharmaceutical firms over a nine-month period after product launch. In all, they collected 15,320 prescription and 16,700 detailing-call observations.

The researchers model physician-level learning through feedback obtained from patients who received past prescriptions as well as marketing efforts by sales reps. They differentiate between the informative effect of detailing (where the physician is obtaining more objective data about the new drug's efficacy) and the persuasive effect of detailing (where the physician's response is determined by the relationship he or she has with the drug company's representatives). As can be expected, the informative effect is the largest in the introductory phase of a drug launch and the persuasive effect comes into greater play after a physician has learned about the new product.

Manchanda and Narayanan observed that an average detailing call is somewhat more informative than an average past prescription (via patient feedback), since it requires a smaller number of detailing calls than feedback signals to reduce the physician's uncertainty about drug quality. Even after a physician has reduced his or her uncertainty about the drug's efficacy and performance, results indicate that detailing still has a positive persuasive effect as the company continues to leverage its relationship with the physician.

When the researchers examined the responsiveness of individual physicians, they found significant variation in the number of detailing calls required to reduce the doctors' uncertainty about new drugs. For example, a "fast" learner needs only four or five calls to learn about the new drug. In contrast, a "slow" learner needs about 12 or 13 calls. Equally interesting, they note that the informative and persuasive effects of detailing move in opposite directions. In other words, physicians who are fast learners, i.e., have a high informative effect, are likely to be less responsive to persuasive sales calls later on. The opposite is true for slow learners who respond more slowly at the beginning but remain more responsive to persuasion for a longer period.

"Our results suggest it would be optimal for firms to allocate higher amounts of detailing initially to the fast learner, but then rapidly reduce this allocation," Manchanda says. "In contrast, for the slow learner, the firm should probably begin detailing a little later than for the fast learner but keep the average level of detailing constant."

What's more, the responsiveness to detailing reduces rapidly to a low level among physicians who are heavy prescribers, the researchers say. The responsiveness of light prescribers reduces more slowly and settles down at a relatively high responsiveness after these physicians have learned about the drug.

Manchanda and Narayanan also conducted three simulations for two newer drugs—Levitra and Cialis—to see if firms could increase their revenues by changing their detailing allocation patterns. They report that changing

both temporal and cross-sectional allocations enables firms to increase revenues by 11-14 percent. Furthermore, accounting for differences in learning rates explains 50-56 percent of these gains.

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